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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,861	11/15/2001	Takao Sugawara	1990.65985	4780

7590 05/06/2004  
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EXAMINER

COLON, ROCIO

ART UNIT	PAPER NUMBER
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2651

DATE MAILED: 05/06/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/002,861

Applicant(s)

SUGAWARA ET AL.

Examiner

Rocio Colon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5, 8, 10, 12, 15, 17, 18, 20 and 22 is/are rejected.
- 7) ☒ Claim(s) 2, 4, 6, 7, 9, 11, 13, 14, 16, 19, 21, 23 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

DETAILED ACTION

*Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5, 8, 12, 15, 17, 18 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim (USPN 6,665,138).

Regarding claims 1, 8, 15 and 18, Kim disclose an information recording and reproducing apparatus for recording and reproducing information onto/from a magnetic recording medium (column 1, lines 21-22), comprising: a data recording unit which inserts a predetermined specific code train into at least two or more portions including head and last portions of data (Fig. 1C, data preamble and data postamble) and records the data onto the medium upon data recording (column 4, lines 1-3); and a data reproducing unit which separates a head reproduced signal (column 5, lines 28-30) by using clocks and, thereafter, executes a clock extraction and an amplitude correction by using a signal corresponding to said specific code train upon data reproduction (column 3, lines 55-56 and 66-67).

Regarding claims 5, 12, 17 and 22 Kim disclose the data recording unit inserts sync bytes into the specific code train (column 3, lines 55-56) and records the data onto the medium, and

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the data reproducing unit detects the sync bytes from the specific code train, presumes a head bit of the data, and obtains a synchronization of a decoding (column 5, lines 24-26).

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 3, 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Applicant Admitted Prior Art (AAP).

Kim disclose in the clock extraction by the data reproducing unit, an inherent sampling time is obtained on the basis of phase information extracted from the signal corresponding to the specific code train (column 3, lines 56-57 and column 5, lines 24-26).

Kim fails to disclose the signal amplitude is sampled again by an interpolating operation of an interpolating filter. The AAP disclose the signal amplitude synchronized with the clock is sampled again by an interpolating operation of an interpolating filter according to the sampling time (page 4, lines 2-5). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the device of Kim because the AAP teaches the signal may be sampled by an interpolating filter to interpolate the signal and obtain a sampling time.

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*Allowable Subject Matter*

3. Claims 2, 4, 6, 7, 9, 11, 13, 14, 16, 19, 21, 23 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rocio Colon whose telephone number is (703) 305-3947. The examiner can normally be reached on Mon-Thu 8:00a.m. -6:30p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (703) 308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
TCV

April 29, 2004

  
DAVID HUDSPETH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600